

A NEW SPECIES OF CAVE-DWELLING NICOLETIID
SILVERFISH (THYSANURA: INSECTA)
FROM THE TEXAS CAVES, QUEENSLAND

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ABSTRACT

Nicoletia russendenensis n. sp. is described from specimens collected in Russenden Cave (VR-2), southeastern Queensland. It differs from other *Nicoletia* in the absence of styli on abdominal segment II and the presence of a pit on the vertex.

Specimens of a species of nicoletioid silverfish were collected by G. J. Toop on 26 November 1972, from Russenden Cave, Texas, Queensland. They were common here and in other caves in the area suggesting that they may be cavernicolous. The type locality is now under the waters of Glenlyon Dam.

Nicoletioids are narrow, parallel-sided insects, lacking eyes and often pigment or scales. They are phytophagous and usually subterranean or cavernicolous in habit. The genus *Nicoletia* Gerv. is characterised by a lack of scales and pigment, with styli on abdominal segments II-IX, and exertile vesticles on segments II-VII. The species described here is placed in the genus *Nicoletia* although it has lost the styli on segment II. However, work now in progress on other undescribed nicoletioids from Australia may create the need for a new subgenus to be erected.

Nicoletia russendenensis n. sp.
(Fig. 1; Plate 12A, B)

HOLOTYPE: T7514 (Queensland Museum), male, collected G. J. Toop, 26.xi.1972, Russenden Cave (VR-2), Viator Hill adjacent to Pike Creek, Glenlyon Station, southeastern Queensland.

OTHER MATERIAL: Three males, two females and one juvenile female, collected G. J. Toop, 26.xi.1972, Russenden Cave. Many others were seen in the caves prior to and especially during the flooding of the caves (Toop pers comm). A paratype has been lodged with the Australian National Insect Collection (unregistered). The remainder of the specimens have been returned to the South Australian Museum (Specimen lot BS 2249).

DIAGNOSIS: This species differs from all other known species of *Nicoletia* in the absence of styli

on abdominal segment II, and the presence of a pit on the vertex.

DESCRIPTION: General colour is white. Length: males up to 5.8 mm, females slightly smaller, up to 5.7 mm. Antennae are very long, 6-7 mm in both sexes. Caudal appendages are of unknown length (damaged in all specimens) but greater than 2.3 mm. Eyes are absent. Mandibles (Fig. 1a) have five primary teeth, and two secondary teeth (one on the first primary, the other on the third). Maxillae (Fig. 1b-c) have 4-segmented palpi with an exertile papilla distally, and a row of stout curved setae on the inner surface of the lacinea. Labium (Fig. 1d) has 4-segmented palpi with each apical segment globose. An obvious pit occurs on the vertex of the head (presumably sensory) (Fig. 1e, Plate 12A). Setae on the margins of the terga are shorter than the length of the segment. Legs (Fig. 1f, g) have 3 claws. Styli occur on segments III-IX and exertile vesicles occur on segments II-VII.

In males the abdomen (Fig. 1h; Plate 12B) has parameres extending only a short distance beyond the base of the styli of segment IX.

In females the ovipositor (Fig. 1i) has eight-segmented anterior gonopophyses with small hooks on tips, the posterior gonopophyses terminate in small globose segments; the total length of the ovipositor is 1 mm.

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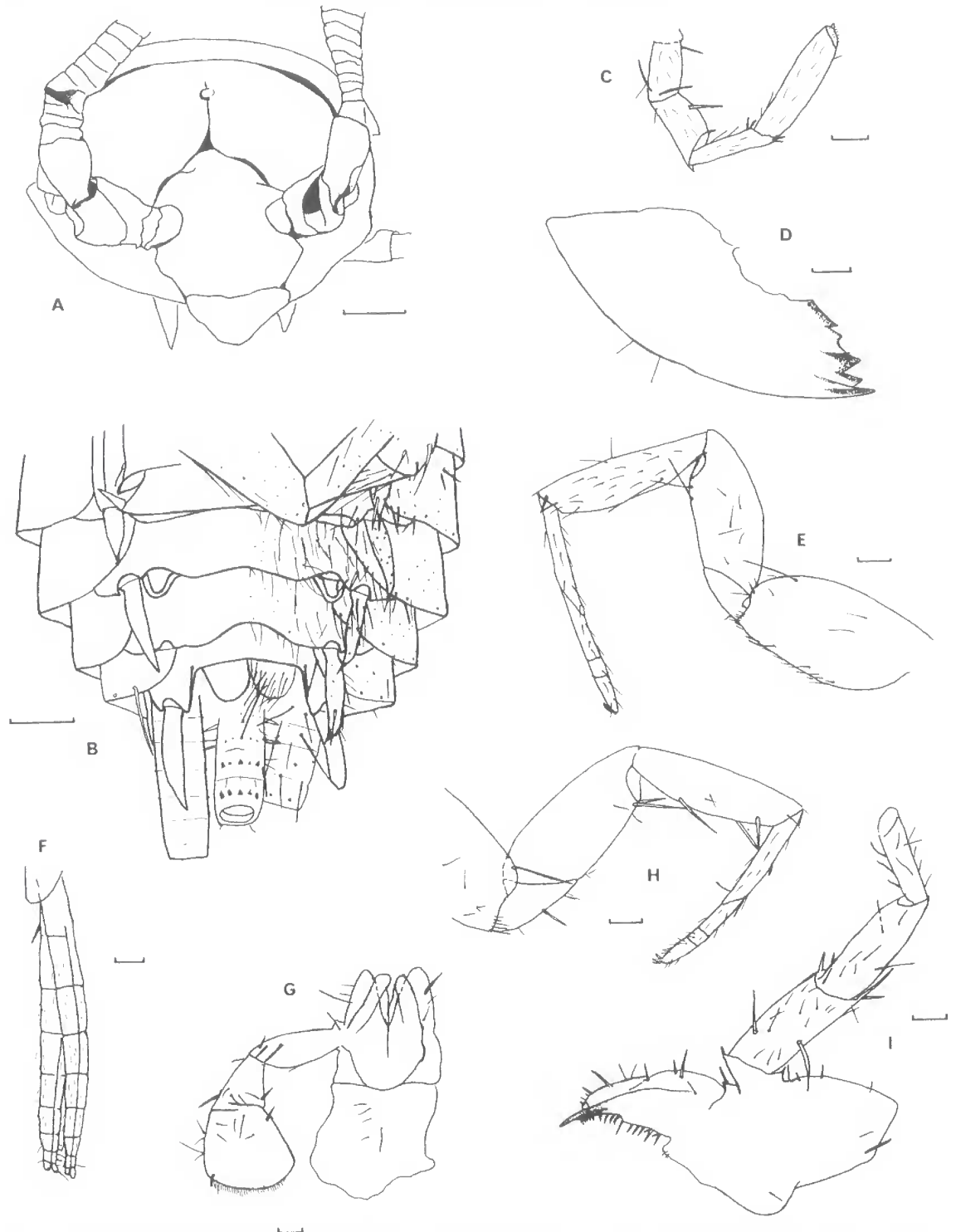


FIG. 1: *Nicoletia russendensis*. A, Cephalic view of male showing pit; B, Ventral abdomen (male), setae not drawn on right side of body; C, Complete maxillary palp (male); D, Mandible (male); E, Hind leg (female); F, Ovipositor, left lateroventral view; G, Labium, only one palp shown (male); H, Mid leg (female); I, Maxilla with apical segment of palp missing (male). Scale lines 0.1 mm.

FIG. A: Cephalic view of the head of a male, X200.
FIG. B: Ventral view of abdominal segments viii-ix of a male, X210.

